Intent

II. Design Standards: Amenities

Develop environmentally responsive architectural elements that borrow from and blend into the natural desert character of each individual Preserve access area site.

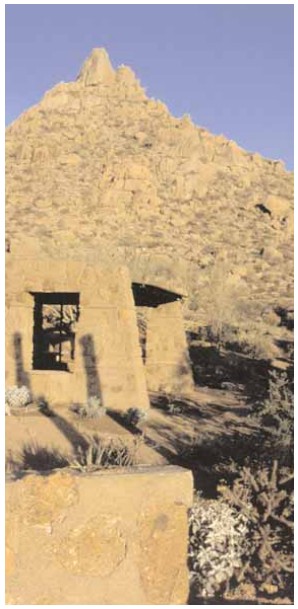
"The wilderness holds answers to questions man has not yet learned how to ask."

- Nancy Newhall

1.0 Building Massing / Solar Orientation

Goals

- Employ building massing to blend with the character of the natural desert landforms and landscape
- Use solar orientation to minimize unwanted heat gain and to maximize natural daylighting and ventilation, while providing a strong connection between interior and exterior spaces



1.1 Building Massing

Building massing shall fit the character of the native landscaping, geology and topography of the specific site.

Buildings should have multiple massing components following the natural flow of the landforms.

Maximum building heights shall not exceed 16 feet above existing grade. Appropriate building appendages such as cooling towers shall not exceed 24 feet above existing grade. All structural elements above the 16-foot limitation shall require staff review and approval on an individual basis.

Building massing shall match the scale of the site and blend into the topography and site landscape, particularly when viewed from a distance. Vertical elements which provide a sharp contrast to the site shall be avoided.

Provide visual interest in site architecture to avoid long expanses of flat wall planes.

Articulate building forms to provide shade and shadow, creating visual interest and relief.

Avoid obstructing view corridors both onto and off of site.

Avoid building forms that are contrary to the topography of the site.

Building entries shall include overhead shade elements to provide transition from exterior to interior space.

All openings shall be recessed to provide shade and shadow.

1.2 Solar Orientation / Daylighting

Solar orientation should be used to maximize north daylight and summer protected south daylight, while minimizing east and west solar exposure where feasible.

Provide a strong connection between indoor and outdoor environments through views and natural daylighting.

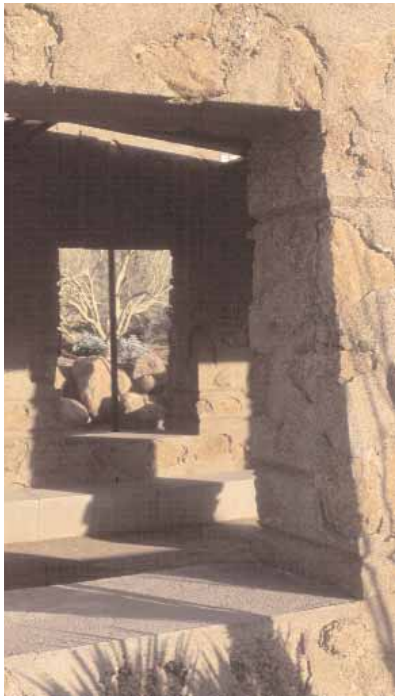
Provide direct lines of sight to vision glazing (c-9 glass) from a minimum of 75% of all regularly occupied spaces. The use of interior light shelves, exterior fins and louvers is encouraged.

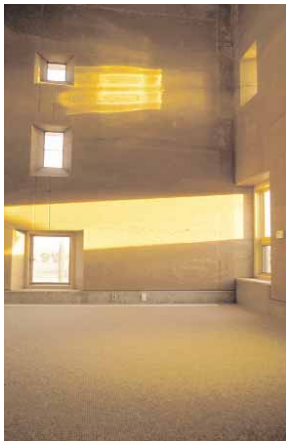
Depending on the scale of the structure and the plan layout, courtyards, atriums, clerestory windows and skylights may also be appropriate design elements to maximize natural daylighting potential.

1.3 Passive Solar Heating and Natural Cooling

Where feasible and appropriate, integrate the design principles of passive solar heating and natural cooling in order to minimize energy consumption for the structures. Passive solar heating should provide for the following:

- South facing glazing (for winter sunlight only)
- Thermal storage mass through the incorporation of such elements as thickened walls and concrete slab construction





Natural cooling principles should include the following:

- Minimize unwanted summer heat gain
- Integration of landscaping around the structure to shade exterior building surfaces
- Maximize use of natural ventilation for cool periods utilizing the prevailing winds. Locate doors and windows to provide cross ventilation
- Consider evaporative cooling systems such as cool towers

Reference Arizona Solar Center (www.azsolarcenter.com) for a more in depth study explanation on each of these subjects.

2.0 Material Palette

Goals

- Utilize "naturally" expressed materials that blend with the texture and color palette of the natural desert site

Examples of appropriate materials:

- Desert masonry, stone, stone filled gabions
- Concrete (e.g. cast-in-place, pre-cast, sand-blasted, exposed aggregate, integrally colored)
- Corten steel with rust finish, weathered steel, copper, natural steel
- Wood
- Rammed earth, cast earth, adobe
- Integrally colored masonry (e.g. textured, sand-blasted)
- Non-reflective glazing
- Fabric for shade structures

When used, stone shall be from the site or shall match the character and coloration of naturally occurring stone at the site.

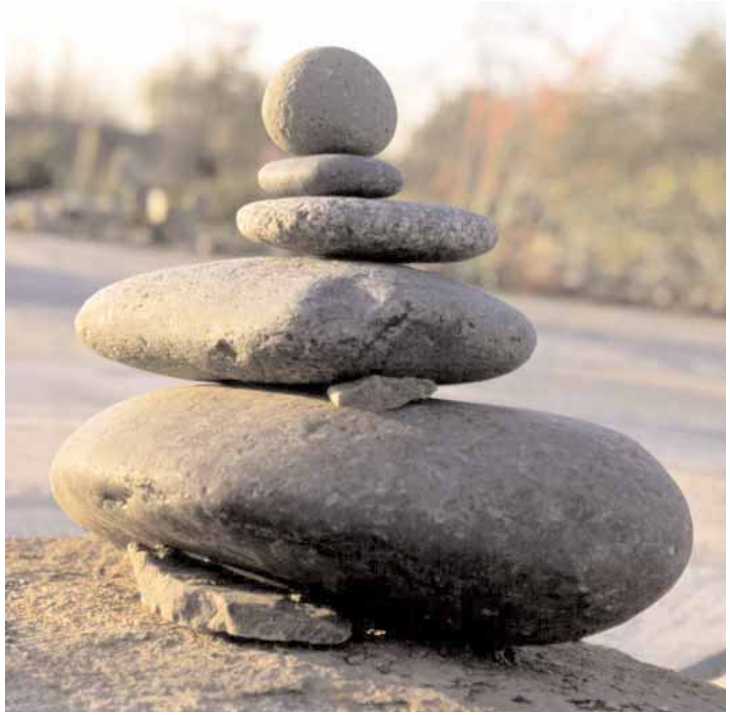
3.0 Green Building Program

Goals

- Minimize the environmental impact of the project and create healthy building environments
- Use guidelines and requirements of the Scottsdale Green Building Program and/or the US Green Building Council's LEED Program in the design of access area structures. Through the frame work of either of these programs, the design team shall integrate design strategies that address the following issues:
  - Site Development
  - Water Efficiency
  - Energy and Atmosphere
  - Materials and Resources
  - Indoor Environmental Quality
- Composting restroom facilities shall be considered, particularly at locations with remote infrastructure connections

The Preserve Gateway / Desert Discovery Center project shall be registered in the USGBC LEED program and shall be certified to a minimum of Silver Level.

Reference the US Green Building Council (www.usgbc.org) and the City of Scottsdale Green Building Program (www.scottsdaleaz.gov/greenbuilding) for more in depth information on the requirements and scope of each program.



4.0 Structure Design Standards

Goals

- Coordinate structure design with requirements of City of Scottsdale "Design Standards and Policy Manual" (DSPM), including, but not limited to, DSPM Section 7.5 – Park Facilities. The Park Design Standards & Policies are not intended to provide specific design criteria, but to serve as a general guide regarding routine standards and policies during the design phase. The design review of each access area facility will be done on an individual basis.